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ogamic botany with DeBary of Strasburg, Müller of Geneva, and Thuret of Antibes. Through the month of August he takes charge of the summer botanical instruction at the Botanic Garden of Harvard University, which is for this month devoted to cryptogamic botany exclusively, mainly to Fungi and Algæ. We understand that he is engaged in the preparation of a manual of our New England Marine Algæ, which, for a beginner, is very much needed.

ZOOLOGY.

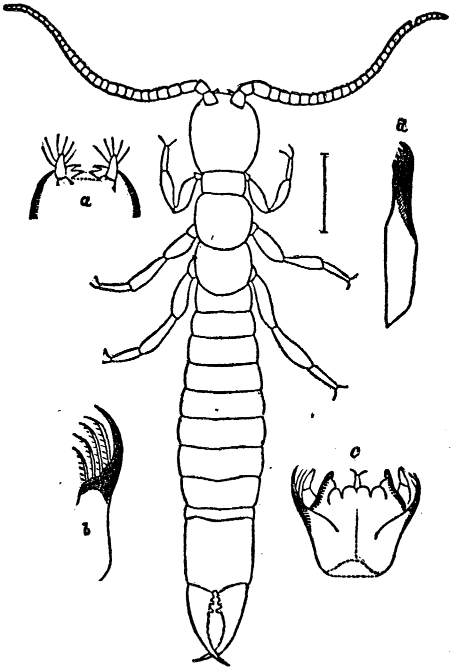
New Species of North American Bird. — On investigation of the interesting sandpiper from the Prybelov Islands, lately mentioned by Mr. Dall in the Naturalist (vii, 1873, 634) as *Tringa* "*crassirostris*," and given under this name in my "Check List" (No. 426 *bis* upon Mr. Harting's identification, I found that the bird is not *T. crassirostris* but an apparently new species, which, in my late appendix to H. W. Elliott's Report on the Prybelov Islands (1873), I have named *Tringa ptilocnemis*. As the work just mentioned is not generally accessible, owing to the smallness of the edition, the following is reproduced in substance: —

Adult in breeding plumage. With somewhat the general appearance of *Tringa alpina*, but the black areas on the under parts pectoral, not abdominal. . . . Legs very short (much as in *T. maritima*); tibial feathers reaching nearly or quite to the suffrago. Tarsus shorter than the bill, or than the middle toe and claw. . . . A coronal area, upper back, interscapular region and scapulars black, completely variegated with rich chestnut-brown, paler ochrey-brown and whitish; the body of each feather being black with one or another or all of these various edgings; the coronal separated from the interscapular markings by a grayish-white, dusky-streaked, cervical interval. Lower back, rump and upper tail coverts blackish-brown, only varied with an occasional chestnut-edged feather. Wing coverts grayish-brown with narrow white edging, the greater ones with broad definitely white tips. Secondaries nearly all pure white, a few of the outermost and innermost also, with grayish-brown touches near the end. Primaries grayish-brown with white shafts, except at tip, and fading to white on the inner webs toward the base; several of the innermost also largely white on the outer web, with definite white tipping. Central tail feathers brownish-black; next pair abruptly paler, grayish; rest white or nearly so, with a faint gray tint. Front and sides of head, supraciliary line, tufts of flank feathers and entire under parts white, interrupted on the breast with a large but not perfectly continuous nor well-defined black area, and marked on the upper breast and sides with a few narrow sharp blackish shaft lines. A dusky auricular patch. Legs and bill dark. Length about 9·50 inches; wing, about 5; tail, 2½; bill, 1·10 to 1·40; tarsus, 0·90 to 1·00; middle toe and claw 1.05 to 1.20.

The other plumages, a series of measurements, general discussion and description of eggs, with biographical notes by Mr. Elliott, will be found in his report. — ELLIOTT COUES.

OCCURRENCE OF JAPYX IN THE UNITED STATES. — While engaged at the end of April in exploring the Mammoth Cave and adjoining caverns with Prof. Shaler of the Kentucky Geological Survey, I detected under a stone in a small cave a few rods north of White's Cave (which may be called White's Cave, Jr.) and from 40 to 50 feet from the mouth, consequently in partial daylight, a specimen of Japyx in company with two *Scolopendrella Americana* Packard, our most interesting myriopod, and not hitherto found except in Salem, Massachusetts. I afterward found several of the Japyx under stones by the roadside near Mammoth Cave. It here occurred, just as I have found the European *J. solifugus* near Vienna, in company with my friend Dr. Brauer. Our species differs decidedly from the European species, with specimens of which I have compared it (see Fig. 91, and details of mouth-parts). It is quite different from the Mexican *J. Saussurii* of Humbert from Santa Cruz and Orizaba.

Fig. 91.



Japyx solifugus.

Japyx subterraneus, as this new species may be called, may at once be distinguished from the other species by the much greater length of the abdomen, the head and thorax taken together being more than twice contained in the abdomen, while in *J. Saussurii* they are two-thirds as long as the abdomen. The 8th abdominal segment, also, is nearly twice as long as in the Mexican species. The head is broader than in *J. Saussurii*, but narrower and pointed a little more than in *J. solifugus*. The forceps are much nearer *J. solifugus* than the Mexican species, and is much longer than in either species. Length ·58 inch; the Mexican specimen measured about an inch. It is whitish, with the two terminal segments honey yellow; the forceps much darker. We shall in a succeeding number figure this interesting form, which is of extraordinary interest, as it is an ally of Campodea, now regarded as a stem-form of the higher insects by Brauer, Lubbock and others.—A. S. PACKARD, Jr.

THE "HATEFUL" GRASSHOPPER IN NEW ENGLAND.—Though the ravages by grasshoppers in New England are caused by the red-legged locust (*Caloptenus femur-rubrum*), it seems that for several years there have been specimens of *Caloptenus spretus* from Maine and Massachusetts in the Museum of the Peabody Academy of Science. They have been hitherto confounded with *C. femur-rubrum*, but are at once distinguishable by the shorter male cerci and the notched terminal ventral segment. The interesting fact about these eastern *C. spretus* is, that they are of precisely the same size and markings of *C. femur-rubrum*, being much smaller and with much shorter wings than the western race, a difference I believe due almost wholly to climatic causes. A number of surmises regarding sexual and natural selection and mimicry might be indulged in, but the facts that might suggest them can be explained by a reference to the different meteorological conditions by which the two races are environed. In Dr. Hayden's forthcoming "Annual Report on the Geology of Colorado," the reader will find a number of facts bearing on the variation in size of body, and form of wings and color in eastern and western examples of the same species of moths, the conclusions from which are borne out by a study of these grasshoppers.—A. S. PACKARD, Jr.

THE KINGLETS IN NEW JERSEY.—If your correspondent, Dr. Abbott, had only been aware that it has been our aim throughout our "History of North American Birds," to state nothing as *known* which is only *surmised* there would have been no occasion for any "surprise" on his part, that our account of the Reguli has been made to conform to this rule. It is never safe to infer from the mere presence of a bird in any particular locality in the breeding season that it necessarily breeds there. I could give you instances without number where birds are found in summer in localities, where, so far as one can ever be sure of a negative, we know they do not breed. We have seen the black-poll warbler in eastern Massachusetts as late as the 10th of June. Yet who supposes it ever breeds here? Dr. Abbott's account escaped my notice, but I certainly could not have made it the occasion of any change in my statement that the Regulus was not then *known* to breed in the United States. I could only have referred to the interesting fact of its occurrence, as stated, as suggestive of its possibility. Nothing short of its actual nest and eggs would have justified me in speaking of its breeding as a certainty.—THOMAS M. BREWER.

ZOOLOGY IN BELGIUM.—The Belgium Academy has lately issued two large octavo volumes, as memorials of its hundredth anniversary. The second volume is of great interest to zoologists as it contains a review of the progress of zoology in Belgium, by the veteran naturalist Prof. P. J. Beneden.

GEOLOGY.

SMALL SIZE OF THE BRAIN IN TERTIARY MAMMALS.—At the last meeting of the Connecticut Academy of Arts and Sciences, June 17th, Prof. Marsh made a communication on the size of the brain in Tertiary Mammals. His researches on this subject have been mainly confined to the larger extinct mammals which he had obtained in the Rocky Mountain region, and the results are of peculiar interest. The Eocene mammals all appear to have had small brains, and in some of them the brain cavity was hardly more capacious than in the higher reptiles. The largest Eocene mammals are the *Dinocerata*, which were but little inferior to the elephant in bulk. In *Dinoceras* Marsh, the type genus, the brain cavity is not more than one-eighth the average size of that in existing Rhinoceroses. In the other genera of this order, *Tinoceras* Marsh and *Uintatherium* Leidy, the smallness of the brain was quite as remarkable. The gigantic mammals of the American Miocene are the *Brontotheridæ*, which equalled the *Dinocerata* in size. In *Brontotherium* Marsh, the only genus of the family in which the skull is known, the brain cavity is very much larger than in the